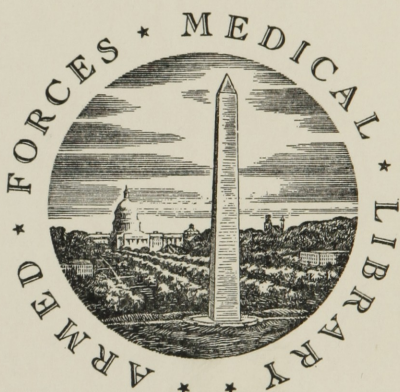


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MEMORIAL

FROM THE

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PROFESSOR OF BOTANY

IN THE

UNIVERSITY OF PENNSYLVANIA,

TO THE

TRUSTEES OF THAT INSTITUTION;

PRAYING FOR

THE REMOVAL OF THE PROFESSORSHIP FROM THE

FACULTY OF NATURAL SCIENCE,

INTO

THE MEDICAL FACULTY;

AND TO RENDER IT A REQUISITE BRANCH FOR THE ATTAINMENT

OF

A MEDICAL DEGREE.

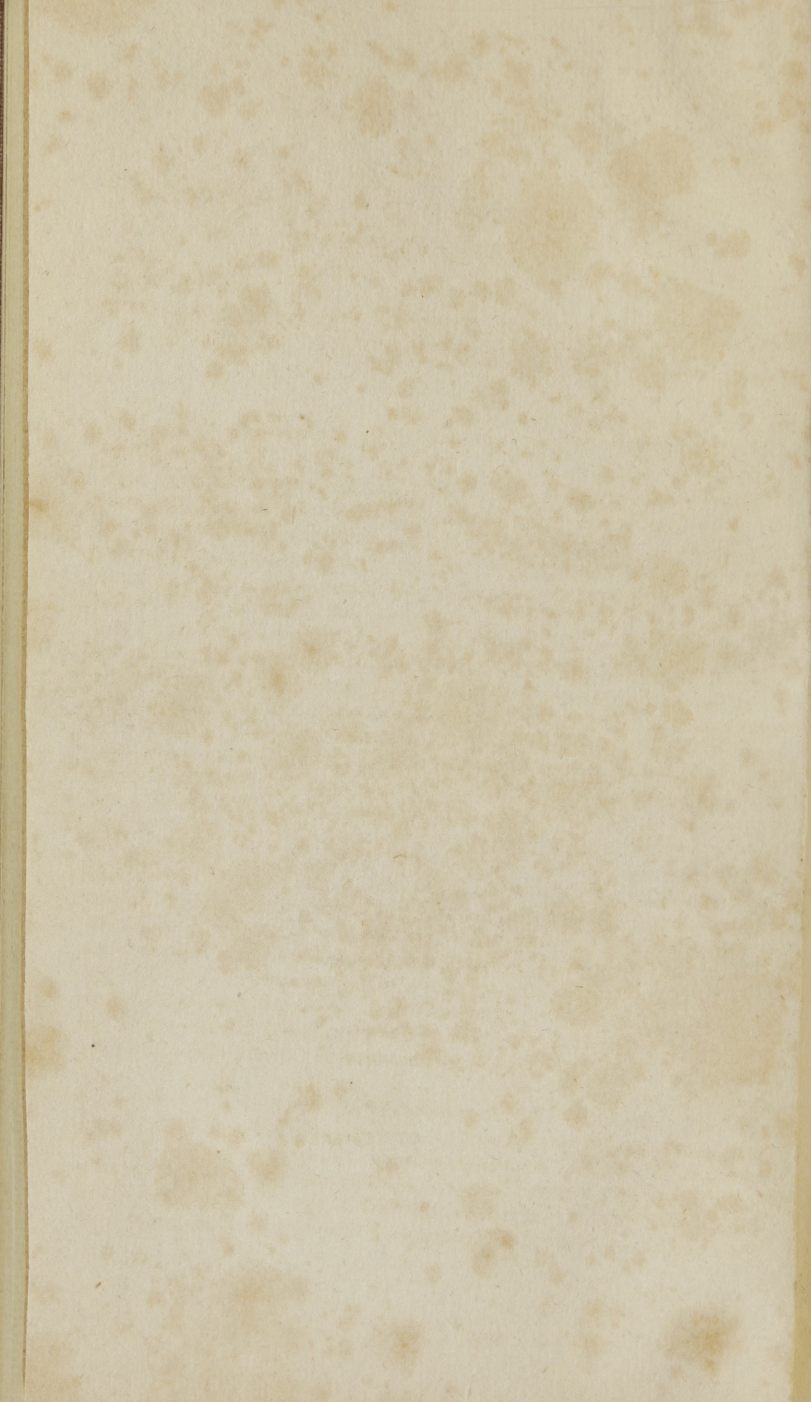


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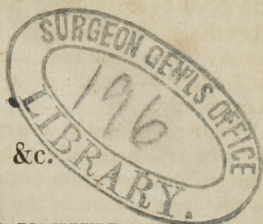
PRINTED BY ROBERT P. M'CULLOH, NO. 6, SOUTH EIGHTH STREET.

1820.

P. B. Boston



MEMORIAL, &c.



TO THE TRUSTEES OF THE UNIVERSITY OF
PENNSYLVANIA;

The Memorial of the Subscriber most respectfully shews:

THAT the medical school of the distinguished institution over which you preside—existing as a department of it since the year 1779—now more than forty years so justly celebrated for its pre-eminence in these states, where it has deserved, and may be proudly styled, the Edinburgh School of America—raised as it has been, to this conspicuous elevation, by the genius and labours of a Morgan, a Shippen, a Rush, a Barton, a Wistar, a Woodhouse and a Physick, illustrious Americans, most of whom have now passed away from among us—inviting by its fame, (supported by the zeal and talents of its present professors,) a concourse of pupils unequalled in any, and envied by all other schools in this country, and still filled by a very large number of students, notwithstanding the iron grasp of the times, occasioned by the pecuniary calamitous state of our country—this school, in the conscientious and unbiassed judgment of your memorialist, is, as he believes, imperfectly organised in one very essential point. The defect in its administration of medical knowledge alluded to, consists in the want of a law, in the Board of Trustees, that shall render it requisite for the pupils of the medical department, to attend the lectures on Botany. This deficiency, in the humble opinion of your memorialist, is the more apparent, owing to the high reputation this school enjoys, which justifies the propriety of any measure calculated to enhance that reputation, by adding to the expected knowledge of the candidates for its honours, a proficiency in a useful and important branch of medical science.

Your memorialist, therefore, respectfully begs leave to call your early attention to this important subject, taking the liberty, which he trusts his official situation under your protection, warrants and justifies: of suggesting to your wisdom and deliberation, the *propriety* and *necessity* of removing the Professorship of Botany from the Faculty of Natural Science, and replacing it where it was at-

tached before the year 1816, and always prior to that period, viz. in the *Medical Faculty*—and that it be rendered *essentially necessary*, that the students of medicine in the school, *shall attend the lectures on Botany* in like manner as their attendance is given on the other necessary branches of a medical education in this distinguished University.

Your memorialist entertains the opinion just advanced, for reasons he will presently state; and he conceives a propriety in being himself the instrument of an attempt to remedy the existing defect in the organization of the Medical School—1st. because, being the incumbent of the chair of Botany, he will reasonably be supposed to feel most deeply the pressure of this organization; and 2dly, because, the very nature of the studies and duties to which that chair calls his serious attention, most fully develops to his mind, the extent and consequences of the evil proposed to be remedied. The result of this intimate acquaintance with the importance of the science, the teaching of which, by your suffrage, has devolved upon your memorialist, is, a conscientious opinion, that the present and future interests of the medical school, imperiously call for the proposed reformation, as the only mean embracing a power to elevate the existing state of depreciation which the professorship of Botany so conspicuously evinces.

3dly, That your memorialist, without arrogating to himself, as he hopes, an overweening officiousness, feels it an imperious duty, to suggest and pray for this reform—a duty which he the more freely acquiesces in the performance of, because he feels, if not a proud, at least a self-satisfying consciousness, that he has not fallen upon his knees, and ventured, in idle prayer, to invoke the aid of Hercules to lift his wheel, without having first put his own shoulders to its trammelled spokes and found his efforts to extricate it vain.

It will not, your memorialist trusts, be denied, by those pupils who have honoured him with their countenance and attendance, or by any one acquainted with the facts, that, even since he has been honoured by your suffrage with the appointment to the chair he occupies, he has, by a zealous and steadfast adherence to the common or ostensible duties connected with it—discharging them with invincible perseverance, in despite of a constant, and galling want of encouragement, endeavoured to raise its reputation to such a point, as would have rendered, by the respectability of the classes in attendance, any call on your interference unnecessary. He commenced his official career with the determined purpose, that he would not ask that succour to support the chair, which your obligatory mandate on the pupils of the school would so easily extend, until he had exhausted every resource of his own judgment, and impoverished every device of his zeal, to accomplish, by his individual efforts, the laudable design of rendering his favourite science not only popular but manifestly useful.

Undismayed by each preceding failure, he has annually renewed, not only with unabated, but with additional fervour, the vain attempt. In a word, he has indefatigably toiled through many courses of lectures, combatting in each succeeding course, many difficulties, and essaying in each many new, untried, and useful additions, but hitherto these have only resulted in as many disappointments. His toil has been as yet the toil of Sisyphus. His efforts have indeed been unremitting, but as yet unrewarded, uncompensated. A full course of lectures on the different points embraced in the syllabus accompanying this address, continued for three months, during which three or four regular lectures were delivered every week, illustrated by expensive specimens, and enforced by the toilsomeness of repeated ambulatory instruction through the neighbouring woods, hills, and morasses, yielding only the sum of *one hundred and twenty dollars*—not more than a fair compensation for one week's time of that mental and corporeal labour, which is necessary for such a duty! Can any comment on this statement be necessary, to convey to your minds an idea of the appalling task of encountering the duties of this chair, under such circumstances? particularly when it is recollected that if not a moiety, at least one third of this sum is required to defray the expenses of such a course of instruction. Yet all this sacrifice of time and labour has been willingly, if not cheerfully made, because made with the expectation, that remuneration though long delayed, would yet attend. The long and dark vista of probation was eagerly pursued in all its devious ways, in the delusive expectation that at its termination a brighter prospect would appear. But, if your memorialist feels a well grounded, and he trusts not an unbecoming assurance, that he has thus far faithfully performed the common duties of his station, with a zeal disproportionate to its reward, and an ardour egregiously at variance with the unpropitious excitement of such paralyzing circumstances—he does not certainly flatter himself, that he can be borne out in any future exertions under similar circumstances, with the shattered stock of expectation that his former futile efforts have left him. Neither can he for a moment believe, that any one of you would impute, what *must be* his future inactivity, in this chair, (unless in your wisdom you think proper to patronise it,) to any dereliction of duty. Your memorialist is the more inclined to this opinion, because his efforts have not ceased, with the mere discharge of his actual duty as a teacher of Botany. They have, as he trusts you will readily acknowledge, extended beyond this; and he indulges the belief, that no unbecoming motive will be assigned to him, in calling to your recollection, that he has also, by every worthy adventitious effort which his ambition could suggest, his ability perform, or his labour, seconded by the increasing wants of a large family, achieve—sought to in-

corporate with his didactick duties, the usefulness of a more public devotion to his professorship. This he has done in the publication of those works, whose chief merit consists in their being a link of the same galling chain of discouragement, which must in future fret and wear out the enterprise of him who so grievously feels its weight. Uncompensated, in any very tangible form, they too partake of the general depression of the science of Botany in this city. They can assuredly bring no adequate compensation, seeing that they appertain to a science, unfostered and unprotected in the medical school.

Hence it is that he now prays to enlist, if possible, the talismanick power of those guardians of our school, the waving of whose legal wand will dissipate in one day, that discountenance and neglect, which the unwearied labours of your memorialist have not been able to effect in four years; and would not, as he believes, be competent to accomplish in twenty, were it possible, which it certainly is not, for human zeal to continue so long against the adamantine opposition he has attempted to resist.

The reasons which influence your memorialist to give it as his opinion, that the Medical Faculty is defectively organized, because it is without a professorship of botany, are,

1st. That botany, either separately taught, or connected with some other department of medical science, is a *necessary branch of medical education*, in *most of the celebrated medical schools of the world*—it might indeed perhaps be added, in *every medical school* of any reputation, except in that of the University of Pennsylvania. That it is so in the great school of Edinburgh, the reputation of which has been so long undiminished; and the numbers of whose pupils is annually increasing—is well known to every physician who has visited that city or that celebrated school—it is well known to many physicians of this town recently educated at that place, as well as to the professors of the medical faculty of the University of Pennsylvania. In Edinburgh, the professorship of botany stands on the same footing as that of *materia medica*, chemistry, or any other branch of medicine. In the far famed schools at Leyden, at Gottingen, at Kiel, at Upsal, in *l'Ecole medicale* at Paris, at Vienna, at Pisa, at Florence, at Copenhagen, at Oxford, at Cambridge, (Eng.) at Glasgow, and in a word, in all of the European medical schools which enjoy an undistinguished reputation—the science of botany is conspicuously patronised; it is placed upon a footing with the other branches of medicine, and the same attendance demanded and enforced on the lectures of professors of botany, as is obligatory on those of other teachers. In Copenhagen, indeed, we have an instance of royal munificence in the patronage of botany, far beyond what is extended to the other branches—for there, besides the botanical garden, a splendid and extensive

work, the *Flora Danica* is conducted by the professor of botany at the king's expense.

In all of the institutions above enumerated, extensive botanical gardens are richly endowed, and maintained. Even in our own country, botany is more fostered in our sister states than in this. In the university of the state of New York, it a necessary branch of a medical education, as it is in the school at Cambridge, where also Harvard University by the rich endowment of count Rumford, now holds out an additional fostering hand to botany.

But to set forth in a most conspicuous light, the importance of the science of botany ; and the high sense of the necessity of proficiency in its principles in the education of a physician, entertained by the wisdom of a British parliament, your memorialist copies from a British work of character, a fact which proves that it is now become essentially necessary by an act of the legislature in Britain, that every student of medicine should possess a competent knowledge of botany—and what this parliament in its zeal for the promotion and cherishment of this science has thought a fit subject for its legislative interference and succour, cannot surely be deemed unworthy of a similar parental guardianship in a body of trustees composed like those of the university of Pennsylvania, of some of our most enlightened citizens. "IT HAS NOW BEEN MADE ESSENTIALLY NECESSARY BY AN ACT OF PARLIAMENT," says Mr. Purton, "THAT EVERY STUDENT IN MEDICINE SHOULD BE WELL VERSED IN THIS SCIENCE ; AND THAT BEFORE HE CAN PRACTICE, HE MUST GO THROUGH AN EXAMINATION RESPECTING HIS PROFICIENCY IN THE KNOWLEDGE OF PLANTS." British plants, by T. Purton, surgeon, 1817—vol. i. p. 7.

Were *arguments* necessary, in addition to the strong *facts* just adduced, to produce a conviction on the minds of your Board, of the importance and necessity of the suggested addition to the medical faculty, they are presented at every view of the state of our rich and independent country, whether with a reference to its medical, its agricultural, its manufacturing, or commercial resources. But the proper limits of this memorial will not permit me to avail myself of the numerous arguments derivable from these various sources. They must indeed, as they are grounded on self-evident facts, be presented to any one who reflects seriously on the subject. Permit me to ask who will doubt the connection of Botany with Medicine, when its objects are known to be the basis of the *Materia Medica*?—and in corroboration of this fact, your memorialist begs leave to call your attention to the first part of the syllabus of the Lectures he has delivered in this school, where this fact conspicuously appears. Who will deny that the knowledge which will enable the physician to investigate and use the rich resources of our indigenous vegetation, in his practice, particularly in the country, will promote the interests of medical science, by enabling him to bring to view and to familiar acquaintance, the valuable native drugs and medicines,

which, besides sufficing for our home consumption, will afford a surplus, as articles of exporting commerce. Who will deny the hand-maid succour of Botany to our agriculturalists? How many of our physicians in the southern and western countries, unite the character of physician and planter? Will any one then pretend to say, that the fostering of Botany in this city, the *punctum saliens* of the science of our country, will not promote the agricultural interest, of a new, an independant, and a great people, inhabiting the wide domains, by which our state confederacy is constantly augmented in our national councils?—and to the advocates of an agricultural policy, will such a view of the subject be deemed unimportant? Who will venture to say that the manufacturing interests of our country, are not likely to be promoted by such means as increase the resources of discovering and promulgating our native dyes? not to mention the well known fact, that we possess indigenous plants whose bark, when manufactured, becomes an important accession to our raiment; and though certainly a scientific knowledge of Botany is not requisite to detect the œconomical uses of plants, it will without doubt, promote, and in reality always has promoted such detection, by enlarging the means of observation. Medicine is the parent of discovery, because of the sciences to which its study naturally leads; as Botany, Chemistry and Mineralogy: and from the increased means of investigation, which these sciences embrace. Physicians, therefore, are the natural patrons and protectors of these hand-maid sciences; and the institutions, established and maintained for their education, cannot extend too much succour to branches of medical knowledge, so usefully, so importantly, and so necessarily studied, by the practitioners of this enlightened profession.

It may here be proper, for your memorialist to anticipate some objections, which he presumes may be advanced, to acceding to the object of this address. It will probably be said:

First, That the medical school is already overburthened with necessary expenses to the attainment of a medical degree.

Secondly, That the glaring want of patronage to the Botanical lectures, which are delivered under the auspices of the trustees of the university, not only indicates that the branch is not a popular or useful one, but that it exemplifies the verity of the first objection.

Thirdly, That lectures on Botany cannot be well taught in the winter season, and that in the spring and summer the medical students have generally returned to their homes.

In answer to the first objection, your memorialist begs leave to acquaint you with the fact, that of every class of graduates, which obtains a degree at this school, there are not perhaps more than five or six members, who have not, during the course of their studies, in this city, besides taking the tickets of the *necessary branches* for a degree, also taken some *private ticket*, as it is termed, from one or other of the professors, or from some respectable physician in

this city. The amount of this private ticket, is always in the proportion of \$100 per annum. This sum entitles the student to private pupilage, for a year, or a proportionate deduction for any part of a year. Besides this, it is notorious, that some of the candidates take two, three, or more of these private tickets of the professors; and furthermore, that they do also attend the private lectures on anatomy, midwifery, chemistry, &c. and instances are not wanting of their attending, both this spring and last winter, two private courses of lectures on anatomy. These facts are confidently stated as being well known to the physicians of this city, and students of this university. *Do they argue a want of finances which would render an obligation to attend another branch, so useful and important as Botany BURTHENSOME OR UNPOPULAR?*

In reply to the second objection, *viz.* that the existing want of encouragement to the botanical lectures is expressive of the unpopularity and uselessness of the subject; and that it evinces a corroborative fact, that an obligation to attend them would be burdensome; your memorialist would answer, that inasmuch as students are willing to give their attendance on those lectures, to which there is no compulsion, and a very small proportion resort to the botanical lectures, it is not at all to be reasonably inferred that the branch in question is an unpopular one. The fact is, that they attend *only* those private lecturers, who teach branches, a knowledge of which is *essentially necessary for a degree*; and hence it is not surprising that they neglect botany, no knowledge of it being required, and appropriate the extra funds they can spare, after taking *the essential tickets*, to the purchase of information which it is expected they will be possessed of, on coming forward for the honours of the school; *viz.* anatomy, midwifery, chemistry, and pharmacy. But I here state a fact, as the result of my own observation and inquiries for several years past, that *were it made necessary* to learn botany to *obtain a degree*, the students would not only cheerfully acquiesce, but eagerly appropriate their time and money to the attainment of a part of their profession, which is always accompanied with delight in its pursuit. They all perceive the necessity of botany; and your memorialist challenges a denial of the fact, that the majority of them, while they see and acknowledge the propriety of chemistry as a necessary branch, look with surprise at the want of a regulation obliging them to be examined on Botany, which cannot be faithfully taught without increasing a knowledge of *materia medica*. They lament this state of things, while it is not surprising, for reasons already stated, that but few of them advance, by their attendance on the lectures, or personal countenance, to remedy it.

Your memorialist would by no means be understood, in the preceding remark, to insinuate that chemistry ought not to be a necessary branch. Far from such a sentiment is that which he entertains on this point. He is not one of those who lower the dignity,

and derogate from the importance, of the profession of medicine, and who consequently virtually depreciate its intrinsic usefulness, by endeavouring to restrict its studies to what are properly denominated the higher branches of this science; viz. anatomy, clinical instruction, surgery, and obstetricks. And though he willingly acquiesces in the opinion, that these branches are entitled to the high rank to which they are accredited, he feels at the same time a well-grounded conviction, that physiology, materia medica, botany, and chemistry, (claiming no greater elevation, as they should not, than to be considered as second-rate branches in point of importance,) are nevertheless as essential as the first to the education of a physician. Botany is properly located in point of importance, when classed with the branches just enumerated; and your memorialist feels himself borne out by the irresistible nature of the facts, when he asserts, that botany is as much a branch of medicine as any one of them.

In answer to the third objection, viz. that lectures on botany cannot be conveniently delivered in the winter, and that in the spring and summer the students have returned to their homes.—Your memorialist to the first part of the objection replies, that such is not the fact; and he not only denies the alleged impracticability, but does it upon the broad basis of experiment. 1st. He has himself in the winter immediately after his appointment to the chair of botany, delivered a full course of lectures during the winter session; 2d. and is at this moment engaged in delivering a course on the subject, at this unpropitious year.

And furthermore, botany *is taught* in many universities and schools abroad, during the winter season, and at home is taught by Dr. Mitchell in New York at the same time of the season.

There can be no difficulty in this to your memorialist, possessing as he now does, a very extensive Herbarium, founded by his own labour, and enriched by the liberal donations of dried specimens received from his numerous correspondents in Copenhagen, in Florence, in London, Liverpool, Paris, in Hamburg, Bremen, Halle, Numremburg, &c. From all of these places, his means of teaching Botany, and extending the new discoveries, made in the science by the learned of Europe, are promoted, by the constant accession to his botanical library, which accrue from these foreign correspondents. Hearing as they have, of the high fame of our celebrated University, they are not only willing but eager to promote its reputation, in so far as that has any thing to do with their favourite science, by a gracious communication to its professor of botany, of every new and interesting addition to this science at home. Their efforts in our favour have not stopped here; but have been conspicuous in their attention in sending annually large quantities of seeds of rare, interesting, and medicinal plants, of Europe, Asia, and Africa, so that if your memorialist had the op-

portunity, he enjoys the means, of adding to the University, a greenhouse of rich and intrinsically valuable exotics, interesting alike from their rarity and their importance in medicine. Convinced, as the foreign professors are, of the importance of this science, and seeing, as they do, the fostering hand extended to promote its advancement in their own country, they fully believe it is of the same importance in this school, nor for a moment think, that it here is suffered to linger with a feeble step at the portal of the high temple of medical learning, when it justly claims, and certainly ought to take, a conspicuous seat at that board of science which graces its most useful internal apartment. Your memorialist does not think that a European professor of a medical school, could conceive as a probable thing that which is a fact, viz. that in the first institution of science in the western world, located in that great city which is called the emporium of American science, so important a science as that of Botany is suffered to drag itself in a lame and limping gait, to this mansion, and, like an almoner, to seek at the outer portal of its thronged avenues, that mite of support, which may suffice to keep it a short time alive, but can neither afford the requisite succour for its maimed condition, nor yield wherewithal to advance its journey.

But if your memorialist is not destitute of a well-stocked and daily increasing herbarium, which is requisite for teaching Botany to a medical class: he is not without the adventitious assistance which the pencil may afford. The use of magnified paintings in the illustration of demonstrative branches of science, has been fully brought into view by the transparencies of Dr. Thornton of London, a successful teacher of Botany; and similar paintings have been exhibited in this city, though by one who possessed not the mental qualifications nor knowledge, necessary for using them with advantage. Your memorialist hopes his motives will not be misunderstood, when in this place he thinks proper to state, that his own habitual freedom in the use of the pencil and the brush, gives him the power of delineating those ideas on canvas, which one acquainted with the science he is to teach, can alone suggest as useful aids to instruction. The aids of painting and modelling his own manual labour could accomplish; and the usefulness of both have this last winter been conspicuously apparent, in the fine models and elegant paintings by which the ingenuity and taste of the present professor of surgery in your school have enabled him to elucidate his lectures.

As he has shown that botany can be faithfully taught in the winter season, the first part of the objection is futile; and to the second part of the same objection he would answer; that, notwithstanding the greatest proportion of students have in the spring and summer returned to their homes, still their remain always, from sixty to eighty during the whole season; this number being

principally composed of those who come from a great distance, as from the southernmost states, New Orleans, the West Indies, &c. And it is always considered by these students as a matter of regret, that they cannot devote the leisure of the sessions' recess, to the acquirement of some necessary branch of study. Should you deem proper to grant the prayer of your memorialist, he will henceforth deliver three courses of lectures in the year; one during the regular winter session, one from March to June, and one in the summer months following. This arrangement would accommodate all classes of students, and, in the opinion of your memorialist, it would be an inducement for many more to remain during the spring lectures, than now do; and thus, by affording a strong motive for prolonging their stay, would indirectly promote their own interest. It would afford more of them the opportunity of benefiting themselves by the excellent courses of private tuition which the private tickets of the professors and physicians of the city, and its public and practical institutions present.

Your memorialist deems this a proper place to recall to your recollection, the efforts made many years ago, by the great father of medicine in this country, the illustrious Rush, seconded by Wistar, and aided by the zeal, the learning, and the fame of the late Professor of Botany, for the establishment of a botanical garden; an appendage to the university viewed by those worthies as loudly called for by its extended fame. What such men, so well qualified to judge of the nature and usefulness of such an institution, suggested as useful, it is hoped will still be deemed a worthy object of attainment. It is humbly suggested by your memorialist that there is no plan so likely to promote the accomplishment of this desirable object, as your obligatory mandate to the pupils of the institution, to attend the lectures on botany; and he conceives it not unreasonable nor chimerical to advance such an opinion. The projected arrangement would bring into popularity and favour this neglected science. The knowledge of its principles and usefulness carried hence by the graduated physicians, would naturally invite a large proportion of them to the future cultivation of the science. Settling, as many of them do, in our wild and romantic country, novel and interesting plants would daily surround them in the professional avocation of a country practice, and new discoveries would hence be made in botany and materia medica. The natural desire we all feel of imparting a knowledge of our pleasures and pursuits in science to others, would act as a perpetual source of enrichment to any institution which might here be founded; seeds, specimens, roots, and plants would be constantly sent to the alma-mater, by her educated sons, and daily accessions to our stock of botanical knowledge thus perpetually made. Once known that this science was conspicuously patronised in our city, so often and so emphatically called the emporium of science in America, by a board of trustees who wield the fate of the greatest literary institution in

this country,—our citizens would insensibly catch the spirit of fostering protection they had extended to this lovely and useful science; and would, by the tangible shape in which this loveliness and usefulness should appear, be incited to extend their liberality to co-operate in its advancement. Liberality opens the way to munificence and endowment; and hence might reasonably be expected to follow, a well-stocked and richly-supported botanical garden, which should, as exhibiting an epitome of North and South American vegetation, become one of the most interesting spectacles in our country.

As a commencement or nucleus of this more-extended garden, your granting the prayer of your memorialist would enable him to build, with your approbation, a *temporary green-house*, on the lot adjacent to the University; and by richly cultivating that enclosure, for which, adequate funds would speedily accrue by his lectures, your memorialist could render that spot, for the present, a well-stocked substitute for a botanic garden. The want of the patronage to his lectures, it will readily occur to you, has, as yet, frustrated his wishes in the cultivation of that spot, which, however, he has no intention of suffering to lie idle.

In consideration of all the reasons, facts, and arguments advanced in the preceding pages, your memorialist again prays, that in your wisdom you will see proper to take the chair of botany into the medical faculty, and render it necessary to attend *at least one course of lectures* for the attainment of a degree of medicine; leaving it optional with the student, to attend this one course at whatever season he may find it most convenient, previous to his coming forward as a candidate for the medical honours of the school.

All which is respectfully submitted by your memorialist,

WILLIAM P. C. BARTON.

Philadelphia, March 13th, 1820.

New-York, March 11, 1820.

DEAR SIR,

IN reply to your favour of the 8th instant, I observe, that in this university Botany in connexion with the other branches of natural history, is made necessary as one of the qualifications of the candidate for medical honours. One course has hitherto been deemed sufficient, but at our examination of the candidates in former years, we have not exacted from them a minute knowledge of the science, and if they were found qualified in the great practical branches of medicine, we have passed them. We now insist upon their general acquaintance with this department of medical

literature, and it is probable that the regents will exact in future, two years attendance upon all the lectures, Botany included. In Edinburgh, Cambridge, Oxford, and on the continent of Europe, Botany is essential to obtain a degree in medicine—as I express myself to my pupils, a physician should be able to read his Dispensatory—this he cannot do without some knowledge of Botanical science. In this country it becomes doubly necessary, to enable the practitioner to avail himself of the vegetable resources with which the United States abound—every acre over which he passes abounds in plants that may be rendered tributary to the healing art, but to be employed with advantage and with safety they must be known. The physician ignorant of those sciences so intimately connected with his profession, is but a *licentiate*—he is doctor truly *sine doctrina*.

I presume it constitutes with you one of the essential preliminary branches of knowledge for those who aspire to the medical honours of your university—if not, I certainly consider your system of education so far defective.

I am, Dear Sir,

Your most obedient servant,
DAVID HOSACK.

Dr. Wm. P. C. Barton.

To Dr. William P. C. Barton.

EXTRACT.

DEAR SIR,

I received by the last mail your letter asking information about the science of botany, as an under-graduate course of medical study.

Botany is now taught by me, as a part of my natural history, to the students of our college. They are obliged to attend it, though it must be remembered that I give instruction on zoology and mineralogy also.

My opinion is, that it ought to form a part of medical education. Whether it ought to be a distinct professorship, or consolidated with *materia medica*, or something else, is a matter of academic detail. But that physicians should be acquainted with the classification of vegetables, and their scientific names, with a sketch at least of their history and uses, is perfectly evident to me.

Truly and respectfully yours,

SAMUEL L. MITCHELL.

New York, 10th March.

LETTERS

Addressed by the Physicians of Philadelphia to the writer of this Memorial, containing their opinions relative to the importance of Botany as a branch of Medical Education. The Titles after the names are added by the writer of this Memorial.

Philadelphia, 3d mo. 30, 1820.

RESPECTED FRIEND.—In reply to thy note, I can state, that I regard a general knowledge of Botany, not only ornamental, but truly useful to the physician, especially in this country.

JOS. PARRISH, M. D.

*One of the Surgeons of the Pennsylvania Hospital
and Philadelphia Alms House.*

Philadelphia, 3d mo. 30, 1820.

I have no doubt of the advantage of a knowledge of Botany, more especially in the present state of our country, and believe it to be a very useful part of Medical education.

SAMUEL P. GRIFFITTS, M. D.

Philadelphia, March 29, 1820.

DEAR DOCTOR—In answer to your note respecting the importance of Botany as part of the education of physicians, I express my belief, that a diffusion of a correct knowledge of that interesting branch of natural history, would increase the value of the Medical Science of our country, and consequently promote the usefulness of the profession.—With great respect, &c.

JOSEPH HARTSHORNE, M. D.

One of the Surgeons of the Pennsylvania Hospital.

Philadelphia, March 30, 1820.

I cordially unite with Dr. Hartshorne, in the above opinion.

THOMAS PARKE, M. D.

Senior Physician of the Pennsylvania Hospital.

Philadelphia, March 31, 1820.

DEAR SIR—I entirely agree with you in the importance of attaining the object on which you propose to Memorialize the Trustees

of the University, and beg you to accept my wishes for the success of a plan, which cannot fail to raise the value and respectability of our profession.—Your obedient servant,

C. D. MEIGS, M. D.

Philadelphia, March 27, 1820.

DEAR SIR—Of the advantages of a knowledge of Botany to the Medical practitioner, I should suppose there could be no doubt. It constitutes one of the elementary branches of science taught in the schools of Medicine of high character abroad, and by a late act of the British Parliament, every one intending to practice the healing art, must be examined on Botany. The arguments urged for the adoption of such measures, apply with increased force in this country. How often, for want of such knowledge, are physicians debarred from the opportunity of employing the medicinal plants indigenous to our fields and woods, that may on many occasions be so advantageously substituted for those of foreign growth. So sensible are the persons engaged in the formation of the National Pharmacopœia, that ordinary language cannot convey an adequate description of the articles employed in Medicine; that opposite to each article drawn from the vegetable kingdom, they have given the botanical appellation together with a reference to some system of approved authority.—Very respectfully your's,

THOS. T. HEWSON, M. D.

*One of the Surgeons of the Pennsylvania Hospital
and Philadelphia Alms House.*

Philadelphia, March 31, 1820.

DEAR SIR—I cordially subscribe to the above opinion of Dr. Hewson.

RICHARD HARLAN, M. D.

Philadelphia, March 31, 1820.

I cordially join in the sentiments contained in the above letter.

WM. CURRIE, M. D.

Philadelphia, March 31, 1820.

I believe the opinion of Dr. Hewson on the subject of Botany to be correct.

JOHN MOORE, M. D. (*the elder.*)

Philadelphia, March 31, 1820.

I subscribe with much pleasure to Dr. Hewson's opinion.

EDW. BARTON, M. D.

Philadelphia, March 31, 1820.

I heartily concur with Dr. Hewson in sentiment.

EDWIN A. ATLEE, M. D.

Philadelphia, March 31, 1820.

The sentiments expressed by Dr. Hewson, with respect to the utility of a knowledge of Botany, as a constituent part of a Medical education, correspond with my own opinions on the subject.

SAMUEL JACKSON, M. D.

Philadelphia, March 31, 1820.

I fully concur with Dr. Hewson as to the importance of a knowledge of Botany to the practitioner of Medicine.

GEO. B. WOOD, M. D.

Philadelphia, March 31, 1820.

I am fully convinced of the importance of Botany to an enlightened physician, and of course I heartily coincide in the sentiments expressed in the above letter.

JOHN CULLEN, M. D.

Lecturer on Chemistry.

Philadelphia, March 29, 1820.

MY DEAR SIR—In reply to your request of my opinion on the importance of a knowledge of Botany to the practitioner of Medicine, I send you the following statement, the result of my reflections on the subject.

It is the knowledge of *Materia Medica*, which places in the hands of the physician the tools by which he is enabled to work at his trade; now it must be conceded that an acquaintance with Botany, is indispensably necessary to study *Materia Medica* correctly, and advantageously; so I think it will appear obvious to the Trustees of our University, that Botany ought to constitute a requisite branch of a proper Medical education.

Suppose a case which no doubt is frequently occurring: a phy-

sician settles in some out-of-the-way place, in some secluded situation in our widely extended country, where he may find it difficult nay impossible to procure, from a foreign source those medicines, on the possession of which the exercise of his profession depends: if he be acquainted with Botany, with his own hand the deficiency is speedily supplied out of the resources of indigenous vegetation; but if he be ignorant of this department of knowledge, can any one imagine that a physician could be placed in a more embarrassing situation. In the language of one of your correspondents, "he is doctor truly *sine doctrina*," and the University which conferred on him that distinguished honour, is exposed to the implication of having given to one the title of a profession, who is without sufficient knowledge to exercise it.—With particular regard, I remain your friend and humble servant,

JOSEPH KLAPP, M. D.

One of the Physicians of the Philadelphia Alms House.

Philadelphia, March 30, 1820.

MY DEAR SIR—In reply to your enquiries, I beg leave to state, that although I conceive a physician may be very skilful without being a *Botanist*, yet I think a Medical education is rendered more complete by embracing an acquaintance with the elements of Botany.—Your's, very respectfully,

JOHN C. OTTO, M. D.

One of the Physicians of the Pennsylvania Hospital.

Philadelphia, March 25, 1820,

DEAR SIR—At your request that I would give my opinion of the importance of a knowledge of Botany, I express my belief, that the usefulness of the profession of Medicine would be promoted, by making an attendance on a course of Botanical instruction, and an examination thereon, a requisite for a medical degree.

I am, &c

JAMES RUSH, M. D.

One of the Physicians of the Philadelphia Alms House.

Philadelphia, March 22, 1820.

DEAR SIR—You request my opinion, concerning the importance of Botany as a branch of Medical education. As a great number

of the preparations of the *Materia Medica* are taken from the vegetable kingdom, I have no hesitation in saying, that it is indispensable to a complete knowledge of our science.

I am, dear sir, your's,

S. COLHOUN, M. D.

One of the Physicians of the Pennsylvania Hospital

Philadelphia, March 30, 1820.

DEAR SIR—In reply to your favour requesting my opinion relative to the importance of Botany as a branch of Medical education, I have no hesitation in saying: that I regard it highly necessary. The numerous articles of the *Materia Medica* indigenous to our extensive country and various climate, appear to me to render a knowledge of Botanical Science infinitely more necessary to a finished Medical education in this county than in Europe.

Your's very truly,

SAML. STEWART, M. D.

One of the Physicians of the Philadelphia Alms House.

Philadelphia, March 31, 1820.

DEAR BROTHER—I do not hesitate to accord with so many of our Medical brethren, in belief of the importance of a knowledge of the science of Botany, as an elementary branch of Medical education, specially to the American physician.—Affectionately,

J. RHEA BARTON, M. D.

One of the Surgeons of the Philadelphia Alms House.

Philadelphia, March 29, 1820.

DEAR SIR—In reply to you, I would observe, that I suppose every physician, will unhesitatingly say, that a knowledge of Botany is indispensable to a complete Medical education; and consequently, it ought to be united to the Medical Faculty in the University of Pennsylvania.

Having lived in the country, and my father being a practitioner of Medicine, I have had an opportunity of observing the great advantage of even a slight acquaintance with Botany. He could direct

the poor countryman how to collect from the woods, and fields, almost all the articles of Medicine which were necessary to be used in his family.—Your's respectfully,

HENRY NEILL, M. D.

Philadelphia, March 27, 1820.

DEAR SIR—In reply to your question relative to the importance of Botany in a Medical education, I beg leave to remark, that its utility is so evidently manifest, that I am constrained to say, it hardly requires an answer. Without a knowledge of Botany it would be most difficult to understand Vegetable Materia Medica, particularly so, as Botany lays the foundation of that science, and qualifies the Medical practitioner to develop, and to ascertain the Medicinal properties of the vegetable kingdom: also, a knowledge of it teaches him how to discriminate between the poisonous and the salutary plants.

This science being one of the most important *links* in the chain of the healing art, the *handmaid*, to the other branches, it is truly to be lamented, that it should be left so far in the back ground. It may be emphatically said, that he who is deficient in this department of Medical Science, is necessarily deprived of that *garland*, which *Flora* always bestows on her votaries!! During my time it was taught with great zeal by your revered uncle, who excited in the Medical students a correspondent enthusiasm, and inspired them with a love for the science; and I hope the day is not far distant, when "some son of *Flora*, will, like the *Phoenix*, rise from his ashes, and blossom as the rose.—With due respect, from, sir, your's most respectfully,

SAML. F. CONOVER, D. M.

Philadelphia, March 23, 1820.

DEAR SIR—In answer to your question, do I consider a knowledge of Botany of importance to the physician? I would state, that, from its connexion with the Materia Medica, its study must be entered on by the man, who is desirous to become an *accomplished* physician. A person can, no doubt, prescribe a medicine of the vegetable kingdom, without being acquainted with its Botanical history, but it is certainly desirable that the man of science should not only know, that opium is a narcotic, but that he should also be informed of the natural history of the plant which produces it.

I am, dear sir, your's truly,

GRANVILLE SHARP PATTISON, *Surgeon.*

Extract from a Note from the same.

“When a candidate applies for a degree at either Glasgow or Edinburgh, he must produce not only tickets of his having attended the usual branches of Medical instruction, but, he must likewise produce at least one certificate, of his having been a student of Botany for three months, or in other words, of having attended one course of lectures on that subject.”

G. S. P.

Philadelphia, March 21, 1820.

DEAR SIR—In reply to your question, relating to the connection of Botany with Medicine, I have no hesitation in stating, as the result of my firm conviction; that no Medical education can be considered complete, which does not embrace as one of its elements, an acquaintance with that science.—and permit me to add, that if in European institutions, Botany has always been considered a necessary branch of Medical attainments; its importance to the practitioner in the new and unsettled regions of our widely extended empire, must be doubly felt, by every one.—Believe me very sincerely, your’s, &c.

JOS. G. NANCREDE, M. D.

Vaccine Physician of the City of Philadelphia.

Philadelphia, March 30, 1820.

MY DEAR SIR—You have requested of me to state to you my opinion, touching the importance of a knowledge of Botany to the formation of a complete Medical education. On this subject, I have no hesitation in saying, that I consider Botanical Science, as an essential branch of knowledge to a well-educated physician. Not that I believe, that a man would not be a successful practitioner of Medicine, without a knowledge of Botany; but, in order that he may be prepared, at all points, to be a successful cultivator of his profession, and to sustain its proper rank in the scale of liberal pursuits, he should have a competent knowledge of this interesting science.—I am, dear sir, your’s very respectfully,

FRANKLIN BACHE, M. D.

Author of “Elements of Chemistry.”

Philadelphia, March 30, 1810.

Dr. Bache's sentiments accord so exactly with my own, that it will be unnecessary for me to say more, than that I subscribe with pleasure to his opinion.

GEO. McCLELLAN, M. D.

Philadelphia, March 22, 1820.

SIR—As you have asked my opinion of the propriety of annexing the chair of Botany to the Medical Faculty of the University of Pennsylvania; I have no hesitation in saying, that I have long considered a knowledge of the principles of Botany an essential part of the elementary studies of a physician.

Every practitioner of Medicine should be capable of accurately and botanically describing all such plants as are unknown to him by their scientific names, and which are known to possess medicinal or deleterious properties.—Your's, &c.

JOHN BARNES, M. D.

Philadelphia, March 25, 1820.

DEAR SIR—You ask my opinion as to the advantages to be derived from making the study of Botany one of the fundamental branches of a Medical education? I have no hesitation in replying, that my firm conviction is, as *Materia Medica* and *Materia Alimentaria*, are already indebted to the vegetable kingdom for many of their most valuable preparations, that a knowledge of Botany will lead the physician to a discovery of new acquisitions to his Dispensatory, and enable him to identify the seat of their most active properties.—I have the honour be, your's very truly,

ROBT. ABBOTT, M. D.

Late of the West-Indies.

Philadelphia, March 23, 1820.

DEAR SIR—You request my opinion as a physician, respecting the propriety of connecting the chair of Botany with the Medical Faculty. In reply, I have no hesitation in saying, that from the intimate connection between Medical Science and Botany, so many articles of the *Materia Medica* being derived from the vegetable kingdom, there can be no doubt of the expediency, indeed absolute

necessity, of every physician who aspires to any dignity or distinguished usefulness in his profession, being acquainted with at least the elementary principles of this branch of natural science.

Your's truly,

WM. PRICE, M. D.

Philadelphia, March 31, 1820,

DEAR DOCTOR—That a Medical education is defective without a knowledge of Botany, I believe is not denied by any one. The importance of the science to the physician, is indeed well established by the fact, that attendance upon Botanical lectures is enjoined upon students in most Medical schools in the world; and did the regulations of this University enjoin the same, my opinion is, that Medical graduates in general, would leave it better prepared for professional usefulness than without such regulations.

I am, respectfully your's, &c.

S. EMLÉN, Junr. M. D.

Philadelphia, 3d mo. 31, 1820.

RESPECTED FRIEND—Having done me the honour to ask my opinion on the importance of a knowledge of Botany to a physician, I am well pleased to add it to what I conceive to be the general voice. I have always considered this science to be a *necessary* part of a complete Medical education.—With great respect,

BENJ. H. COATES, M. D.

Germantown, March 29, 1820.

MY DEAR SIR—Having heard from a gentleman of this place that you seem desirous of collecting the sentiments of your professional brethren, respecting the necessity of Botany as an elementary branch of a Medical education; I have herewith taken the liberty of adding my opinion in its favour; under the full conviction that Botanical knowledge is indispensably necessary to a well educated physician.

I may perhaps be told, that hundreds of physicians have very justly acquired a high reputation for professional skill, who had comparatively no knowledge of Botany; I grant this position; but at the same time, if the observation of lord Bacon is correct "that knowledge is power," (a remark which I believe few will deny)

certainly the man, who, to his other professional acquirements, has added a knowledge of plants, is much more likely to alleviate the distress of his suffering fellow creatures, than one not being possessed of such information.

In this country, more than in Europe, if possible, is Botanic knowledge desirable, as in the thousands of unexplored acres comprised within the territory of the United States, there must be many plants eminently serviceable in the healing art; accident will no doubt develop the virtues of many of them, but in enquiries after truth it is certainly not a good doctrine to leave any thing to chance which can be rendered certain. I must apologize for having trespassed so long on your patience, and remain your's very respectfully,

SAML. BETTON, M. D.

Philadelphia, March 31, 1820.

DEAR SIR—I reply to your request for my opinion relative to the importance of Botany as an elementary branch of a Medical instruction, I have to reply: That from the intimate connexion of Botany with the Materia Medica, I certainly think a knowledge of that interesting science, indispensable to the attainment of a complete course of Medical education; and I further believe, that it is doubly important to the physician of this country.

Truly your's, &c.

RICHARD POVALL, M. D.

Philadelphia, March 31, 1820.

DEAR SIR—In answer to your request, I can state that I conceive Botany to be a highly useful and ornamental part of a Medical education.—With sentiments of esteem, your obedient servant,

JO. B. LAWRENCE, M. D.

Late Practitioner of Medicine in New Orleans.

Philadelphia, 4th mo. 1st. 1820.

DEAR DOCTOR—In compliance with thy request, that I would give an opinion respecting the importance of Botany as a part of a Medical education, I am willing to express my belief, that a correct knowledge of that interesting branch of natural history, would add very much to the usefulness of the Medical profession.

Respectfully thy friend,

N. SHOEMAKER, M. D.

Boston, March 29, 1820.

DEAR SIR—Your letter of the 23d, requesting my opinion of the connexion of Botany with Medicine, has been received. I have always considered an attention to the auxiliary branches of Medical science as highly important to physicians, and believe that a liberal education in Medicine cannot be complete without them. Botany being subsidiary to Medicine, at least as far as it furnishes the means of discriminating medicinal and deleterious plants, is doubtless deserving of attention in a general course of Medical studies. Its importance is enhanced by the consideration that a great majority of practitioners have their residence in the country, where occasions are frequent for its practical application.—Very respectfully your friend and servant,

JACOB BIGELOW, M. D.

Rumford Professor in Harvard University,

Philadelphia, 4th mo. 31, 1820.

DEAR SIR—I have read your Memorial to the Trustees of Pennsylvania University with much interest. I have always thought as you do sir, that Botany should constitute a prominent branch of Medical Science; especially to the American physician, who is situated in a country extending almost from the Tropic to the pole, including all the varieties of climate, soil and locality. Within that tract are growing a vast variety of Medical plants common to the old world, and many important ones indigenous to our own, and in sufficient number to fill a useful *Materia Medica*, and in quantity to meet all the demands that the vegetable kingdom is called upon, for the cure of diseases. But how ignorant are we of the qualities and *modus operandi* of these highly useful and otherwise important plants! Let our able physicians and respectable druggists answer! An important fact respecting a want of this particular knowledge in our physicians came within my knowledge during the late war. Dr. Tilton, the surgeon and physician general to the army, requested me to furnish the army of the United States with some of the most important Medical roots and plants which our country could supply, for the use of the army surgeons; In compliance with his desire, I forwarded to my assistants, to be supplied by them to the several regiments and hospitals, the extract of *hyosciamus*, *stramonium*, *cicuta*, *phytolacca decandra*, *eupatorium perfoliatum*, and the powders of the *veratum viride*, *sanguinaria canadensis*, *lobelia inflata*, *siphilitica*, *asclepias decumbens*, *podophylum pelatum*, *triosteum perfoliatum*, &c. &c. But what was the result? no use was

made of them, and they were left neglected in the hospital and medicine chests in consequence of their use not being known to the otherwise learned and able physicians.—Wishing you success, I remain, dear sir, your obedient servant,

FRANS. LE BARON, M. D.

Apothecary General of the Army of the United States.

This Memorial may be concluded with the following remarks to the Trustees: That your respondent, desirous of placing at your command, the *Medical opinion* of this city, touching the importance of Botany as an elementary branch of Medicine, has asked for, and obtained the preceding notes. It is needless to remind you that they are from most of the respectable physicians of the city; and consequently they present the aggregate opinion of eminent and well informed practitioners, wholly disinterested and unbiassed in the expression of their sentiments. As such, your Memorialist doubts not, it will receive due weight, in your deliberations on this point.

Before taking a final leave of this subject, your respondent would beg leave to anticipate and answer, an additional and fourth objection to those already anticipated, which he presumes it likely will be presented by those unwilling to promote the object of this Memorial, viz. That a want of time would be an obstacle to introducing a new branch in the Medical course.

To this your respondent would reply, by calling to your attention that *three hours* of each week, for a period of four months, will be all the time required by the lecturer, should the proposed plan be carried into effect; and he trusts it will not be denied, that in demonstrative branches, like those of Anatomy, Chemistry, and Botany, by far the largest and most valuable portion of instruction is conveyed, by the lectures alone: And that very little reading on the subject, if it be faithfully taught, can be requisite to obtain a general knowledge of the elementary principles of the science. Botany is, strictly speaking, a demonstrative branch—more so than Chemistry, and nearly as much so as Anatomy.

No one will deny this, except such as are unacquainted with the proper method of teaching it. If then anatomy can be taught by lectures alone, and surely no one will pretend that it may not be learned without the aid of books, it follows, that all the necessary insight into Botany may be given, by didactic and demonstrative instruction alone. And if the more assiduous students think proper to assist their progress, by a little reading on the subject, it will not surely be insisted that this voluntary application will prove injurious to their interests or that it will weaken their education. The more that is required of a student in the way of study within a cer-

tain reasonable and attainable point, the less is he liable to be led to the aberrations from duty, which the allurements of pleasure are so apt to produce. In a word it may be said, that a student, ambitious, assiduous and eager for knowledge, will always find time for study, even though he should purloin it from more inviting but less profitable hours, devoted to the incompatible avocations of pleasure, while one disposed to negligence and sloth, and *anxious only for a medical degree*, will never find leisure to learn any thing more than the evanescent text-book information. This in a year or two leaves him, in possession indeed of the grand climateric of his ambition, a doctors' diploma, but without any of the solid learning which ought to be demanded of candidates in a school of great repute, as an essential foundation for this academic honor. The future conduct and attainments of such men, deprived as they are of the foundation of elementary science, will fritter and wear away the little Medical information they have acquired in the school, and carry unfortunately in its fall, the character and pledge of the University which pronounced him, learned and wise, and fit to take on him the deep, deep responsibility of the lives of his fellow creatures.

And lastly, your Memorialist would wish in an especial manner to call your attention to the fact, that a very small proportion of all the graduated physicians in this University fix themselves for future practice in cities or large towns. Perhaps not more than twenty out of one hundred become city practitioners, the remaining eighty, being scattered over the immense territory of these states, often remote from the seats of commerce, science and the arts. How infinitely important then does it appear, that all those educated in this Medical school, should be compelled to obtain a competent knowledge of Botany. Without it, those especially who become country practitioners, are curtailed in their inclination and ability of being useful. And so palpably is this the case, that this is a view of the subject which has presented itself to the mass of those Medical men, who have laid their opinions before the public in the preceding pages.

With a firm reliance on the facts, and irresistible inferences deducible from them, set forth in this Memorial, a hope is formed that they will cause you not to hesitate in adding to the Medical course of instruction in this University, a course of Botany. Your Memorialist begs you to bear in mind, that he asks for a law to make it necessary to attend *only one course of his lectures at a fee of fifteen dollars*. There are at present five courses of lectures in the Medical school at \$20 each course, and a sixth at \$15, viz. the Midwifery. It is, by your laws, necessary to attend two courses of these different Medical professorships. The plan now proposed by your Memorialist would only add a sum then of fifteen dollars to the whole expense of Medical education; and when the benefit this sum may purchase appears of such magnitude, he hopes you

will not hesitate to add it. Under these impressions, your Memorialist respectfully resigns the interests of the science he loves and delights in teaching, to your care and protection.

WILLIAM P. C. BARTON.

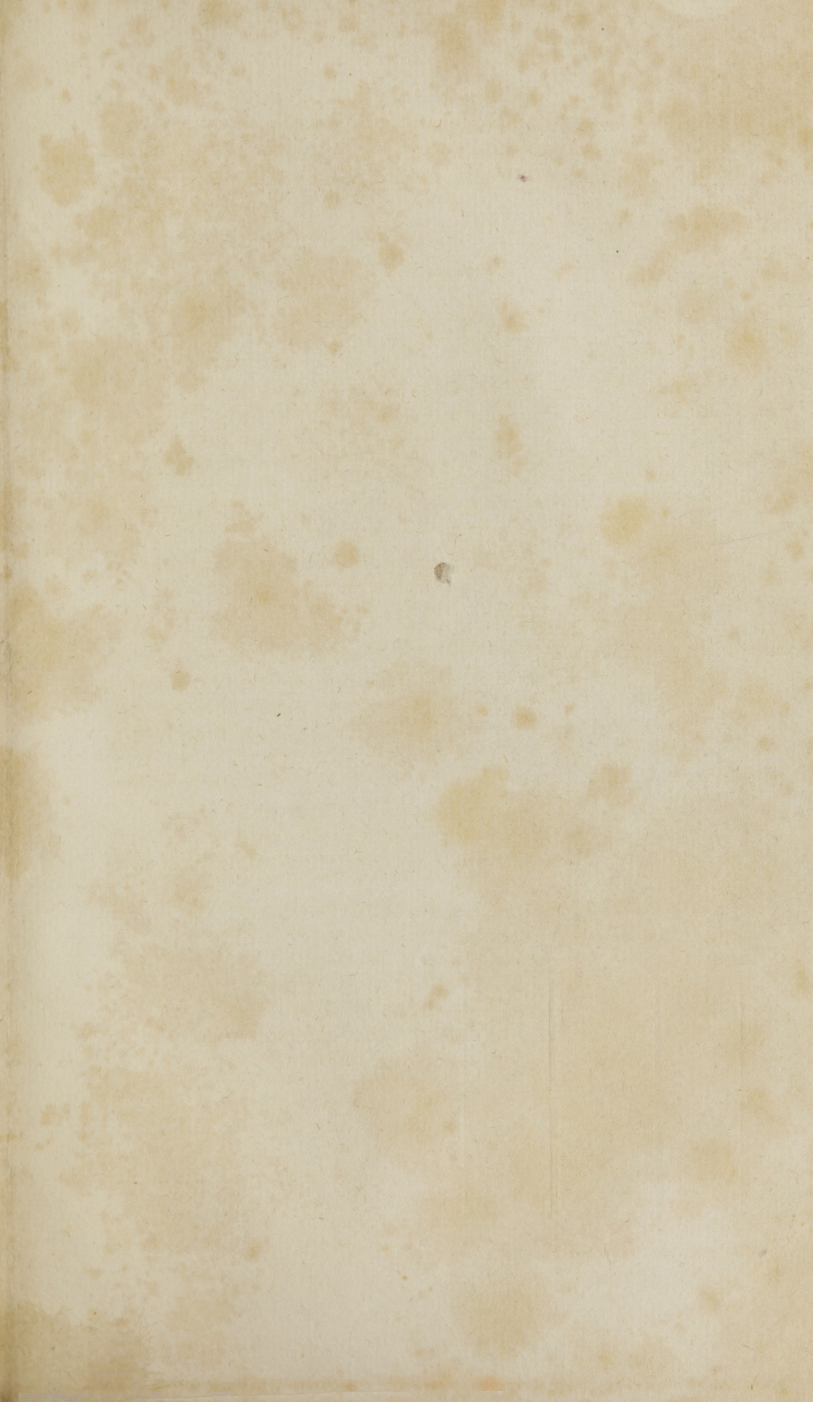
Philadelphia, April 1st. 1820.

Professorships in the Medical School of the University of Edinburgh necessary to Graduation.

1. Alexander Monro, M. D. PROFESSOR OF ANATOMY.
 2. John Thompson, M. D. PROFESSOR OF SURGERY.
 3. James Hamilton, M. D. PROFESSOR OF MIDWIFERY.
 4. James Gregory, M. D. PROFESSOR OF THE PRACTICE OF PHYSICK.
 5. Andrew Duncan, Junr. M. D. PROFESSOR OF THE INSTITUTES OF MEDICINE.
 6. Francis Home, M. D. PROFESSOR OF MATERIA MEDICA.
 7. Robert Graham, M. D. PROFESSOR OF BOTANY.
 8. Tho. Charles Hope, M. D. PROFESSOR OF CHEMISTRY.
- N. B. Fee for each course of the above, four guineas.
-

Professorships in the Medical School of the University of Glasgow, necessary to Graduation.

1. James Jeffery, M. D. PROFESSOR OF ANATOMY.
2. Robert Freer, M. D. *Professor of the Practice of Physick and the Institutes of Medicine*—delivering separate courses on each subject.
3. Mr. James Towers, PROFESSOR OF MIDWIFERY.
4. Mr. John Burns, PROFESSOR OF SURGERY.
5. Dr. Millar, *Professor of Materia Medica*.
6. Thomas Thompson, M. D. Professor of Chemistry.
7. The Professorship of Botany, lately filled by Dr. Graham, but now vacant by the recent translation of that gentleman to the Professorship of Botany in the University of Edinburgh.



Shortly will be put to Press,

VOL. III.

OF

VEGETABLE MATERIA MEDICA

OF THE

UNITED STATES,

OR

MEDICAL BOTANY:

CONTAINING

A BOTANICAL, GENERAL, AND MEDICAL HISTORY OF MEDICINAL PLANTS
INDIGENOUS TO THE UNITED STATES;

ILLUSTRATED BY COLOURED ENGRAVINGS

MADE AFTER ORIGINAL DRAWINGS FROM NATURE

DONE BY THE AUTHOR.

BY

WILLIAM P. C. BARTON, M. D.

CORRESPONDING MEMBER OF THE IMPERIAL SOCIETY OF AGRICULTURE
OF FLORENCE; PROFESSOR OF BOTANY IN THE UNIVERSITY OF
PENNSYLVANIA, &c. &c.

This Volume will be a Continuation of the Work of which Two Volumes are already completed; and will, like them, be printed in quarto Size, and in a superior Style of Paper, Engraving, &c.

Med. Hist.

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